

# Evidence Packaging Manual

605-773-3673

SOUTH DAKOTA
FORENSIC LABORATORY

Wherever he steps, whatever he touches, whatever he leaves, even unconsciously, will serve as silent evidence against him. Not only his fingerprints, or his footprints, but also his hair, the fibers from his clothes, the glass he breaks, the tool marks he leaves, the paint he scratches, the blood or semen that he deposits or collects –all of these and more bear mute witness against him. This is evidence that does not forget. It is not confused by the excitement of the moment. It is not absent because human witnesses are. It is factual evidence. Physical evidence cannot be wrong; it cannot perjure itself; it cannot be wholly absent. Only its interpretation can err. Only human failure to find it, study and understand it, can diminish its value."

From Kirk, Paul L.

Crime Investigation

New York: Interscience

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#### **Preface**

The purpose of this manual is to promote efficiency and simplicity in the evidence handling procedures for all evidence coming into the possession of the SDFL (South Dakota Forensic Laboratory). By following these guidelines we intend to establish standardized packaging methods for evidence submission to SDFL.

These guidelines will meet the specific needs of this laboratory, but will not cover every circumstance that one may encounter. If in doubt about a collection, packaging, or storage procedure, contact the Lab and speak to that specific area.

This manual attempts to instruct the officer in packaging techniques through the use of photographs and text in a step by step approach. Following the instructions are "Points of Interest" which contain important information pertaining to specific circumstances or packaging tips.

In addition this manual offers a fairly detailed list of services offered in each functional area. It also describes the types of services and analyses that SDFL does NOT provide, however lists possible outsource labs for your consideration. We are not allowed to recommend one lab over another.

Explanations are not always given for concepts that are considered basic law enforcement procedure. Certain phrases are common throughout the manual. Whenever they are given, the following can be referenced:

- ...seal with evidence tape... = use tamper proof tape marked as EVIDENCE and place along package openings to seal in contents, preventing loss or cross contamination and providing notice of unauthorized opening. The investigating officer should use a **permanent marker** to write his/her signature or initials & date sealed on the tape.
- ...attach BEAST packing slip... = refers to the paperwork generated when your case is entered into the BEAST (Barcoding Evidence Analysis Statistics and Tracking) computer system. This signed form MUST accompany all evidence submitted to the Lab.
- ...fasten plastic tie on the inside... = plastic ties used to anchor an item inside a box to prevent shifting should be fastened with the knob or ratchet end of the plastic tie on the box's interior. The box will not lie flat if the ratchet end is on the box's exterior.

The Evidence Custodian has the right to refuse property (Right of Refusal) not packaged in accordance with this manual. Such property will be returned to the investigating officer via FedEx or designated carrier to allow for satisfactory changes to be made, and the evidence resubmitted in a timely manner.

### **South Dakota State Forensic Laboratory**

1302 Easy Hwy 14, Suite 6 Pierre, SD 57501

has been assessed by the

## Forensic Quality Services Forensic Accreditation Program

and found to comply with the requirements of ISO/IEC 17025:2005 and Forensic Requirements for Accreditation (FRA 1)

The scope of the accreditation is identified in the FQS-I Register of Accredited Laboratories

This Certificate Number is 08-FQS-I-04 Accreditation is effective 2008/10/19 and expires 2012/01/17

FQS
Forensic Quality Services

Terry Mills

Manager of Accreditations



#### **SDFL Mission Statement**

The South Dakota Forensic Laboratory is dedicated to providing forensic science services to the law enforcement and judicial systems of South Dakota in the specialties of computer examinations, serology/DNA-CODIS, fingerprint-AFIS, trace/arson, and firearms-NIBIN/toolmarks. The SDFL will continually strive to ensure the quality and reliability of its laboratory data through the use of established methods and procedures which are adequately documented. The SDFL quality system will strive to ensure that functions are performed as intended, in accordance with good laboratory practices.

The SDFL will maintain an open and honest relationship with all parties of law enforcement and the judicial system. Examiners participate in ongoing field investigations by conducting crime scene searches, performing photography, and providing other on-scene scientific and/or technical, scientifically sound, accurate, and as complete a report as possible.

Personnel within the SDFL will make every effort to foster support and trust among fellow employees, & emphasize a dedication to excellence and ethical integrity when working for the people of South Dakota.

#### **SDFL Operations**

Employees of the State Forensic Lab operate under the administration of the SD Division of Criminal Investigation and Attorney General.

The State Forensic Lab shall conduct scientific examinations to assist law enforcement officers in criminal investigations.

The State Forensic Lab cooperates with private medical facilities, other State & Federal Agencies and law enforcement by providing procedures and facilitating the availability of materials used for managing, collecting, and examining sexual assault evidence and convicted offender DNA data basing.

State Forensic Lab personnel instruct Lab Capabilities to the General Law Enforcement training sessions, Highway Patrol recruit classes, physical evidence recovery techniques/procedures as requested by law enforcement on and off site, and attend to informational training requests made by law enforcement, attorneys and others. If you have any such training needs, please contact the SDFL Director at 605-773-3673.

#### Field Assistance/Crime Scene Assistance

The complexity and demands of a major crime often overwhelm the resources of a law enforcement agency. The necessity to do a thorough and complete investigation is equally incumbent upon all agencies, regardless of resources and training. SDFL offers crime scene assistance as needed. Contact SDFL Lab Director Frans Maritz @605-773-7850 (work) or 605-295-0653 (cell) or Assistant DCI Director Brian Zeeb @605-773-4624 (work) or 605-690-6227 (cell) if you need crime scene assistance.

#### **SD Forensic Laboratory**

#### **Lab Management System**

## <u>Barcoding, Evidence, Analysis, Statistics, and Tracking</u> "BEAST"

BEAST operates on the Regional Information Sharing System (RISS) through the Mid-States Organized Crime Information Center (MOCIC) system.

BEAST is your online connection to the SD Forensic Lab (SDFL), allowing you to prelog your evidence, check the status of your case(s) and receive your examination results online. Your access to the coDNA offender data base is also through this system.

To establish your RISS and BEAST accounts, please fill out the online application at:

#### https://apps.sd.gov/dci/riss/newapp.aspx

On the application please check all RISS applications applicable to your position. For the SDFL, check "BEAST" and "coDNA". Record the password you have chosen and keep in a secure location.

If you have an established RISS account but did not check "BEAST" and "coDNA" you must reapply for a new account. Again, check all the RISS applications applicable to your position. Each officer must have their own RISS account (MOCIC regulations).

Once your account is established, via email you will receive your user name, as well as attachments with step by step instructions for submitting evidence. Print out the instructions to assist you when prelogging evidence.

Questions RE: filling out the application: Jamie 773-4803, Ross 773-2883

Questions RE: BEAST: Paulette 773-7843, Peggy 773-7845

Questions RE: coDNA data base: Charlene 773-3673, Stacey 773-7832

#### **Procedure For Submitting Evidence To SDFL**

#### **Paperwork**

All evidence submitted must be accompanied by a signed copy of the BEAST Prelog Packing Slip. In addition, for digital evidence submitted include a "Digital Evidence Examination Request" and either a Search Warrant or a Search/Wipe Consent form (both forms are available on the Attorney General website http://atg.sd.gov) If you are submitting a firearm for destruction, include a teletype copy of the negative record from NCIC, and a court order for destruction.

#### **Evidence Packaging/Marking & Sealing**

Refer to the specific areas of evidence collection in this manual for guidance on properly packaging particular evidence. Contact the SDFL with any questions at 605-773-3673.

Every item of evidence submitted must be properly sealed. Acceptable seals include tamper proof evidence tape, reinforced packaging tape, or a heat seal. The individual sealing the evidence MUST place their initials and date sealed across the seal or tape onto the package itself. Evidence which does not meet the sealing requirement cannot be accepted for analysis by the SDFL, and will be returned to you for proper packaging and resubmission. Each item of evidence submitted should have your inventory number written on the package. This inventory number must coincide with your BEAST prelog.

Packaging of criminal cases should include information of where the item was found, by whom, date and time found, item description, and your inventory number. This inventory number must coincide with your BEAST prelog.

#### **Case Priority**

All submitted cases are assigned a routine priority and added to the current backlog. To elevate a case to a higher priority assignment, please contact the SDFL Director at 605-773-3673.

#### **Return of Evidence**

All evidence submitted to the SDFL will be returned to the submitting agency upon completion of analysis, unless otherwise indicated on the BEAST prelog. Evidence is shipped via FedEx Ground service or other designated carrier.

#### **SDFL Capabilities**

Not all examinations listed on the following pages are provided by the SDFL, but can be completed in partnership with other laboratories (outsourced). These examinations are printed in blue. Depending on the outsourced source, there may be an expenditure for the examination; this expenditure is the responsibility of the requesting agency\*.

If the only examination required on submitted evidence from your agency is an outsource, we encourage you to contact the outsource laboratory directly and eliminate our participation. Prior to your outsource, please check with the SDFL staff to determine if this particular examination may not be offered in our laboratory.

\*Reviewed on a case by case basis.

The SDFL does NOT perform blood alcohol exams, toxicology exams, or narcotics exams. These items should be submitted to:

**SD Health Laboratory** 

615 E 4th Street

Pierre, SD 57501

605-773-3368

The SDFL offers SD Law Enforcement crime scene including searches, photography, and providing other on-scene scientific and/or technical services as necessary. Please contact the SDFL Director at 605-773-3673 to request these services.

#### **BEAST Examination Categories**

**Crime Scene** 

CSI Crime Scene Investigation

Collecting, documenting, and managing physical evidence from scene of

crime

CSR Crime Scene Reconstruction

Determination of most probable sequence of events

VEH Vehicle Inventory/Search

Inventory of items taken from vehicle search

VEP Vehicle Processing

Collecting, documenting, and managing physical evidence from

a vehicle

**Biology Section** 

BIO Biology

Examination of evidence for the presence of biological materials such as blood, semen, and saliva; DNA analysis of evidence samples and known

reference samples

CODIS Combined DNA Index System

DNA profile search of databases (State and National) to generate investigative lead through a DNA profile match; searchable indexes are: offender, forensic (casework), missing persons, unidentified human

remains, and biological relatives of missing persons

For SDFL use only.

**Firearms Section** 

FA Firearms Identification

Analysis of fired cartridge and/or shot shell components to determine the possible type of firearm involved. Includes comparison to recovered and

submitted firearms

BTE Bullet Trajectory

Analysis to determine the pathway or trajectory bullets take during short

and distant travel

EPT Ejection Pattern Test

Analysis to determine how a particular firearm arrays the fired

cartridge cases ejected from it

FUN Functionality Test

Analysis to determine functionality and operability of firearm. Includes trigger pressure analysis to determine the amount of force required to

actuate the firing mechanism

**GSR** Gun Shot Residue

Analysis of GSR (primer residues) kits taken from suspect's hands or other evidence items e.g. clothing, vehicle interiors to determine whether or not an individual has discharged a firearm or were in close proximity of a discharged firearm.

MUZ Muzzle to Target

Analysis to determine the distance between firearm and target (all types of firearms including shotgun and shot pattern evidence). Includes visible and non-visible GSR (smoke, soot, burned and partially burned gunpowder particles) analysis. This type of GSR analysis is different from the GSR (primer residues) analysis performed on GSR kits collected from a suspect's hands and/or other evidence surfaces (listed above).

NIB National Integrated Ballistics Identification Network

The input of characteristics of expended ammunition into a national

computer data base for comparison purposes

**POA** Point of Aim

Analysis to determine the accuracy and precision of a firearm's

sights to the point of aim

**SNR** Serial Number Restoration

Restoration of erased and/or obliterated serial numbers

TM Tool Mark

Comparison of tool marks left at a crime scene to known standards

produced by the suspect tool

FC Firearms Collection

Per SDCL 23A-37-13, describes controlled firearms and weapons disposal

**BAL** Ballistics

Analysis not included in any of the other examination categories, e.g. chemical examinations to determine the presence of bullet material residues (lead, copper, etc), order of shots (e.g. glass), measuring muzzle velocity and energy, determining bullet entrance vs. exit, terminal ballistics (projectile behavior on a target and/or target behavior on a

projectile)

**Trace Section** 

CHE Chemical

Analysis to determine the identification of unknown substance

FIB Fiber

Analysis to determine the identification of fiber type; comparison of

known and unknown fibers samples

**GLA** Glass

Analysis to determine if two samples come from same source; fracture

matching

**HAI** Hair

Analysis to determine hair species & origin

SOI Soil

Analysis to determine composition of suspect soil

**PRO** Protective Coating

Analysis to determine the layers of a protective coating such as paint

MIC Microscopic

Analysis to determine presence and identity of unknown

substance (e.g. fingernail scrapings)

IGL Ignitable Liquids

Analysis of liquid substance to determine if substance is flammable

**FDA** Fire Debris Analysis

Analysis to determine if debris contains an accelerant

FAB Fabric Impression

Analysis of impressions formed when a fabric contacts a hard surface

#### **Document Section**

**QD** Questioned Document

Analysis to answer questions about a disputed document; may involve comparison of the questioned document to a set of known

standards; most common type involves potential

authorship of handwriting.

IP Ink, Papers, Alterations, and Obliterations

Inks can be examined to determine if different inks were used to produce a particular document in question. Inks that have been obliterated or destroyed through fading, burning, water, overwriting, chemicals, or other

means can often be recovered and made legible.

Paper can be compared with known samples to determine if the document

in question is similar to a known sample.

Paper can sometimes be dated or traced to a particular source or

manufacturer.

Alterations and Obliterations exams are performed in order to detect whether a portion of a document has been

altered, some portion rendered not readily visible, or some text added.

IND Indented Writing

Indented writing is an imprint which may be left on the underlying pages when the top sheet of paper is written upon. This impression of the writing is influenced by pen pressure and thickness of the paper. Indented writing is very useful as a form of connecting evidence, such as tying a robbery

note to a writing pad recovered from a suspect.

**PPM** Paper Physical Match

Anything that is torn, cut, fractured, snapped, pulled, or ripped apart can be matched back to its congruent counterpart, e.g. matches reconstructed to their match books, shredded or tom documents, cut documents, etc. Paper that has been burned or water soaked can often be restored.

#### **Fingerprint Section**

**FP** Latent Fingerprint Examination

The fingerprint section performs two types of exams within this request:

print processing and latent comparisons.

**Print processing** cases consist of crime scene evidence from which the print section attempts to develop latent prints. Latent prints of value are compared to any known suspects and/or searched through the Automated Fingerprint Identification System (AFIS). AFIS houses latent print and ten-print card information. Through AFIS, crimes can be linked to one another, to arrestees or individuals on file, or perhaps both.

**Latent comparison** cases consist of an agency's submitted lifts taken from a crime scene. These lifts are compared to individuals under investigation as well as entered into the AEIS database.

as entered into the AFIS database.

Tire Print Examination

Analysis of either photographs or casts (preferably both) of tire tread marks to

determine if patterns of two samples are the same; also to determine if specific

tire made a specific print

SHO Shoe Print Examination

Analysis of either photographs or casts (preferably both) of shoe pattern to determine if patterns of two samples are the same; also to determine if specific shoe made a specific print

#### **Digital Evidence**

TP

**DEP** Digital Evidence Preview

Analysis of digital evidence to see if evidence is present; only

specific type of evidence that submitter requests will be looked for (e.g. child porn, text messages). Prelog must be accompanied by Digital Evidence

Request for Laboratory Examination (see Attorney General website www.atq.sd.gov;(follow DCI link to Forensic Lab link) No CD

report of exam is issued. No search warrant or consent forms required.

**DEA** Digital Evidence Analysis

Full analysis of digital evidence to include computers, cell phones, digital cameras, etc; only specific type of evidence that submitter requests will be looked for (e.g. child porn, text message). Prelog must be accompanied by Digital Evidence Request for Laboratory Examination (see Attorney General

website www.atg.sd.gov; (follow DCI link to Forensic Lab link)

Search warrant or consent forms required.

**DEFA** Digital Evidence Field Assist

Request a digital evidence examiner to assist in a search warrant and/or

other field activity on site.

**DEI** Digital Evidence Image

Request for copy of examiner's evidence files or suspect's hard drive

**DERC** Digital Evidence Report Copy

The request for duplication of an FTK report for an additional distribution

**DEW** Digital Evidence Wipe

Request for computer hard drive to be wiped completely clean; authorization form required (see Attorney General website http://www.atg.sd.gov (follow DCI link to Forensic Lab link).

**DEE** Digital Evidence Video/Audio Enhancement

Request to enhance media for clarity

Miscellaneous

**CRI** Criminalistics

A specific analysis type not usually requested, but significant to a specific

case. Contact the laboratory to discuss this option.

COM Compliance w/SDCL

Analysis of an item(s) which requires a specific examination that will result in a compliance with any SDCL, such as the weight of gunpowder allowed in pyrotechnics (firecrackers). Also used in conjunction with firearm destruction requests. Court order must accompany all firearm destruction

requests, as well as a copy of the negative NCIC check.

PHO Photograph Media Request

Request to photograph specific pieces of evidence as required

NCA Non Criminal Assist

The Non Criminal Assist analysis code is appropriate for use when assistance is required by a department/agency in which a criminal offense did not occur, i.e. recovery of data on an officer's hard drive after a

computer malfunction.

**BPI** Blood Stain Pattern Interpretation

Examination of the shapes, locations, and distribution of patterns of bloodstains, in order to provide an interpretation of the physical events

which gave rise to their origin

#### **Outsource Testing Resources**

The following is a list of resources available to conduct analyses that the SDFL is unable to provide at this time, or to be available for private examinations. This is not an all-inclusive list. State law prohibits us from recommending one resource over another.

#### **BLOODSTAIN PATTERN INTERPRETATION**

The South Dakota Forensic Lab does not offer BPI examinations at this time. BPI examinations may be obtained from the following:

Todd Thorne Michael J Van Stratton, Lab Director

Thorne and Associates KBI Forensic Laboratory

262-645-3346 1620 SW Tyler

tathorne@wi.rr.com Topeka, KS 66612

785-296-8300

Larry Barksdale Carolyn Gannett
Lincoln PD Gannett Forensics
402-441-6965 619-606-5756

<u>lpd211@cjis.lincoln.ne.gov</u> <u>gannettforensics@aol.com</u>

#### **FORENSIC DNA TESTING**

The SD State Forensic Lab offers forensic biology/PCR STR DNA testing services at no charge to SD City, County, and State Law Enforcement involved with criminal investigations. The SD State Forensic Lab will actively manage case loads and number of samples to be tested by attempting to identify the most probative items through constructive dialog with the submitting agency. The SD State Forensic Lab also manages CODIS as per SDCL 23A-5A-1.

PCR STR DNA analysis of biological materials may also be obtained from the following:

AFIP (Armed Forces Inst. Of Pathology)

1413 Research Lab Blvd. Bldg #101

Rockville, MD 20850

301-319-0210

(Federal agencies only)

**Chromosomal Labs Inc** 

1825 W Crest Lane

Phoenix, AZ 85027

623-434-0292

**Genelex Corporation** 

3000 1st Ave. #201

Seattle, WA 98121

206-382-9591 Ext 2852

**Lab Corp DNA ID Testing Div** 

1440 York Court

Burlington, NC 27215

800-522-6671

www.labcorp.com

**Bode Technology** 

10430 Furnace Road Ste 107

Lorton, VA 22079

866-263-3443

www.bodetech.com

**Forensic Science Associates** 

3053 Research Drive

Richmond, CA 94806

510-222-8883

**Identity Genetics** 

801 32nd Ave

Brookings, SD 57006

800-861-1054

www.identitygenetics.com

Nat'i Medical Services Lab

3701 Welsh Road

Willow Grove, PA 19090

www.nmslab.com

**Orchid Cellmark Inc** 

13988 Diplomat Drive

Farmer's Branch, TX 75234

www.orchidcellmark.com

**Strand Analytical Lab** 

**5770 Decatur Blvd Suite A** 

Indianapolis, IN 46241

317-455-2100

www.strandlabs.com

**Orchid Cellmark Inc** 

1400 Donelson Pike Suite A-15

Nashville, TN 37217

www.orchidcellmark.com

**Analytical Genetic Testing Center** 

7808 Cherry Creek South Dr #201

Denver, CO 80231

303-750-2023

#### **Touch DNA**

The South Dakota Forensic Lab offers touch DNA examinations on a case by case basis. Contach SDFL at 605-773-3673 to discuss your request. Touch DNA examinations may be obtained from the following:

**The Bode Technology Group Inc** 

10430 Furnace Road Suite 107

Lorton, VA 22079

866-263-3443

www.bodetech.com

**Orchid Cellmark** 

13988 Diplomat Drive

Farmers Branch, TX 75234

www.orchidcellmark.com

800-872-5227

**Bexar County Crim Inves Lab** 

7337 Louis Pasteur

San Antonio, TX 78229

210-335-4100

www.bexar.org/crimelab/

**National Medical** 

3701 Welsh Road

Willow Grove, PA 19090

800-522-6671

www.nmslab.com

LabCorp

1440 York Court

**Burlington, NC 27215** 

www.labcorp.com

800-742-3944

#### MITOCHONDRIAL DNA (mtDNA)

The South Dakota Forensic Lab does not offer mtDNA examinations at this time. Mitochondrial DNA examinations may be obtained from the following:

**AFIP (Armed Forces Inst. Of Pathology)** 

1413 Research Lab Blvd. Bldg #101

Rockville, MD 20850

301-319-0210

(Federal Agencies only)

**Lab Corp DNA ID Testing Div** 

1440 York Court

**Burlington, NC 27215** 

800-742-3944

www.labcorp.com

**Orchid Cellmark Inc** 

13988 Diplomat Drive

Farmer's Branch, TX 75234

800-752-2774

www.orchidcellmark.com

**Bode Technology** 

10430 Furnace Road Ste 107

Lorton, VA 22079

866-263-3443

www.bodetech.com

**Mito Typing Technology** 

2565 Park Center Blvd #200

State College, PA

814-861-0676

#### **QUESTIONED DOCUMENT**

The South Dakota Forensic Lab does not offer questioned document examinations at this time. Questioned document examinations may be obtained from the following:

#### **Janis Tweedy, D-ABFDE**

Mendota Heights Business Center 750 S. Plaza Drive, Suite 210 Mendota Heights, MN 55120 651-994-9770

#### **Karen Runyon**

Minneapolis, MN 612-338-5414

#### **Dennis Rohr**

Mandan, ND 701-663-1320

#### **Grant Sperry, US Postal Document Inspector**

US Postal Laboratory Memphis, TN 901-747-7757

www.asqde.org/fdes

#### **Archeology and Entomology**

The South Dakota Forensic Lab does not offer archeology or entomology examinations at this time. These examinations may be obtained from the following individuals:

#### Archeology:

#### **Katherine Lammie**

**SD Archaeological Research Center** 

2425 E. Saint Charles Street

PO Box 1257

Rapid City, SD 57709

Direct line: 605-394-1804

Research Center: 605-394-1936

katie.lammie@state.sd.us

#### **Entomology:**

**Dr. Melissa Connor** 

402-465-2550

mconnor@nebrwesleyan.edu

**Dr. Scott Connor** 

402-423-3052

dougdscott@aol.com

#### **Evidence Intake**

The SD Forensic Laboratory Evidence section is responsible for the intake of incoming evidence to ensure the proper procedures are followed to maintain the highest level of integrity for the evidence. The evidence and case management is maintained in the Porter Lee Bar-coding, Evidence, Analysis, Statistics and Tracking (BEAST) online program which also disseminates immediate available laboratory results directly to the officer's desk computer. This section also provides education and training related to all aspects of the collection, handling, storage, maintenance and eventual final disposition of evidence collected for analysis.



#### **HOURS**

The hours for personal delivery intake are Monday - Friday, 8 a.m. to 5 p.m.

After hours evidence locker delivery is available. The appropriate paperwork must be placed in the locker with the evidence. Contact State Radio @605-773-3536 who will contact building security for access to this area after hours.